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WEI DON, EXAMINER

26M2/0506

DONALD K FOREST
209 CROYDON AVE
ROCKVILLE MD 20850-4145

ART UNIT

PAPER NUMBER

2609

DATE MAILED: 05/06/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

- ☒ This application has been examined ☒ Responsive to communication filed on 4/17/96 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Three month(s), days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☒ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

- ☒ Claims 1-106 are pending in the application.
Of the above, claims 2-5, 7-72, 74-79, 81-84, 87-89, 93, 95-97, 99, 102, 103, 105 are withdrawn from consideration.
- ☐ Claims have been cancelled.
- ☐ Claims are allowed.
- ☒ Claims 1, 6, 73, 80, 85, 86, 90, 91, 94, 98, 101, 104, 106 are rejected.
- ☐ Claims are objected to.
- ☐ Claims are subject to restriction or election requirement.
- ☐ This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on . Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on , has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
- ☐ The proposed drawing correction, filed , has been ☐ approved; ☐ disapproved (see explanation).
- ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. ; filed on .
- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
- ☐ Other

EXAMINER'S ACTION

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1. Applicant's election with traverse of Species VI (this species has been read on claims 73, 80, 91, 94, 98, 101, 104, and 106 which are directed to the speech synthesis embodiment) in Paper No. 9 (Filed 4/17/96) is acknowledged. The traversal is on the ground(s) that claims 1-2, 4-6, 14, 39-46, 49-53, 67-68, 71-72, 78, 81, 85-86, and 105 are generic to the speech synthesis embodiment. This is not found persuasive because as previously stated in the election of species requirement only claims 73 and 80 are explicitly directed to a speech synthesis embodiment. Since claims 73, 80, 94, and 106 are independent and directed to a speech synthesis embodiment, they can be read on Species VI.

In MPEP 806.04(d), it is stated, "a generic claim should include no material element additional to those recited in the species claims." This phrase suggests that in the present case claims 73, 80, 94, and 106 could be generic to dependent claims which include additional limitations and depended from claims 73, 80, 94, and 106.

MPEP 806.04(d) further states that a generic claim "must comprehend within its confines the organization covered in each of the species." Since species VI has been elected and is directed to a speech synthesis embodiment, any claim generic to this speech synthesis embodiment must include within the claim at least the speech synthesis limitation. Otherwise, "It may define only an element or subcombination common to the several species".

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Since claim 91 includes all the limitations of claims 1 and 90, claims 1 and 90 will be examined with claim 91. Here note in view of the above statements claims 1 and 90 are not generic to the speech synthesis embodiment. They are included in the rejection so that a complete action can be given.

Since claim 98 includes all the limitations of claims 1 and 6, claims 1 and 6 will be considered with the speech synthesis embodiment and will be examined with claim 98 so that a complete action can be given.

Claim 101 includes all the limitations of claims 85 and 86. Therefore, claims 85, 86, and 101 will be examined together.

Claims 73 and 104 are directed to a speech synthesis embodiment.

Please note that claims 1, 6, 86, 85, and 90 define elements or subcombination common to several species but this does make these generic to Species VI (see lines 4 -6 of MPEP 806.04(d)). However, as required applicant has elected a single species (i.e. Species VI which is direct to a speech synthesis embodiment). Therefore, only the claims directed to this species will here be examined. The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2-5, 7-72, 74-79, 81-84, 87-89, 93, 95-97, 99, 102, 103, and 105 are withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected

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Species, the requirement having been traversed in Paper No. 9 (Filed 4/17/96).

3. Claims 1, 6, 73, 104, 80, 85, 86, 90, 91, 94, 98, 101, 106 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 9, the "responsive" function should be correlated within the claim to the movement in the claim. Claims 6, 90, 91, and 98 do not correct the above mentioned error.

The letters in claim 73 do not have clearly claimed antecedents. Claim 104 does not correct the above mentioned error.

In claim 80, the "movement related" to a signal and the "periods of intersection of the cursor" should be more closely correlated within the claim.

In claim 85, the dwell event should be more carefully defined within the claim. Claims 86 and 101 are not correct the above mentioned error.

In claims 94 and 106, the "movement related signal" generating means and the dwell event should be more clearly defined within the claim.

4. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 86 S.Ct. 684, 15 L.Ed. 2nd 545 (1966), 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103 are summarized as follows:

1. Determining the scope and contents of the prior art;
2. Ascertaining the differences between the prior art and the claims at issue; and
3. Resolving the level of ordinary skill in the pertinent art.

6. Claims 1, 6, 73, 80, 85, 86, 90, 91, 94, 98, 101, 104, and 106 are rejected under 35 U.S.C. § 103 as being unpatentable over Baker et al in view of Callahan et al (CHI 88), WiViK₂, Graf, Golding et al, and Lazzaro.

The patent to Baker et al teaches (col. 5, lines 3-25) a periphery 41 defining a window 42; menu items 43-50 around periphery 41 (these items are associated with portions 51-58 of

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the periphery); interior box (Fig. 9); and exterior box (Fig. 9). Here note these boxes form the active area of a window 42.

In column 2, lines 42-48 of Baker et al, it is pointed out that the invention "minimizes a screen area required for menu selection purposes in an interactive display terminal made up of a display screen having at least one window of lesser dimensions than that of the display screen and displaying subject matter different from that displayed on the remainder of the screen."

Although Baker et al is directed to menu items which have to be actuated, in column 5, lines 33-55 of Baker et al, it is suggested that "some sort of template" can be used outside the screen to aid in learning "the relationship of peripheral regions to menu items". To one of ordinary skill in the art, this would have obviously suggested a four sided template to surround at least the periphery 41 of window 42. Therefore, the template would eliminate the need for the actuated menu items. However, the above mentioned active area of window 42 would be surrounded on the screen by at least a plural sided figure (i.e. by definition a polygon).

Here the patent to Baker et al only requires one "window of lesser dimensions than" the display screen to be employed in their invention. In such an arrangement, in view of the above statements, the patent to Baker et al would have obviously suggested to one of ordinary skill in the art a display on which

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may be displayed a plurality of selectable regions within a polygon on the display. The regions on and associated with the template of Baker et al would obviously define plural selectable regions on and within a polygon around or/and on a display. In fact, such a suggested template could have motivated one of ordinary skill in the art to implement the template in hardware, software, or firmware to be on the display surrounding a window. Therefore, Baker et al suggest virtual and actual menu items in peripheral regions around a window.

In column 9, line 46 - column 10, line 18 of Baker et al, it is suggested that at least a succession of three selection events have to occur between one of the peripheral regions and a cursor. First, the cursor has to enter the above mentioned active area of window 42 to select a menu item. Second, the system verifies the menu item selected by establishing the cursor is still in the selected region after a certain time (note this means the cursor could have moved to a different region and returned to the selected region between the "certain time" elapsed). Third, after verification that a menu item has been selected, the function or action defined by the item can be initiated. These three events read on the claimed succession of selection events or the repetitive recognition of quantities to actuate a function or action.

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The patent to Baker et al does not explicitly define all the menu items claimed or a voice output device.

At the time that the invention was made, Callahan et al (CHI'88 - page 96, first column) defines a pie menu as a menu where "items in the menu are placed at equal radial distances along the circumference of a circle". If the periphery 41 defining window 42 in Baker et al and the periphery arrangements in Figs. 1 and 2 of Graf are equated to a circumference, the invention of Baker et al and Graf are directed to pie menus. Figures 1 and 2 of Graf and the second column, lines 1-4, page 96 (Callahan et al, CHI'88) suggest menu items can be grouping of items, time, direction, numbers, words, etc.

One of ordinary skill in the art having Callahan et al (CHI'88) and Graf would have been motivated to realize the menu items in Baker et al as letters, numbers, or words. Here further note that Callahan et al (CHI'88) and Graf suggest how non-virtual menu items (i.e. a template) can be implemented in Baker et al. Callahan et al (CHI'88, page 96, second column) explicitly state, "the user need only move the cursor by a small amount in some direction for the system to recognize the intended selection". Graf (column 4, lines 39-42) explicitly states, "Signals which are maintained for periods in excess of the time necessary for fixation (see the above mentioned sections from Callahan et al (CHI'88) and Baker et al (col. 9 - col. 10)) to

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occur would tend to show that the operator had consciously focused on an object".

In view of the above statements, it would have been obvious that the dwell selection mentioned by WiViK₂ (page 66) could be substituted for the button actuation in column 10, lines 1-5 of Baker et al.

In view of item 63; column 6, lines 23-29; and column 9, lines 20-74 of Baker et al, it was known at the time that the invention was made that a conventional data processing system employs at least a display (see column 5, lines 50-63 of Baker et al). At the time that the invention was made, Golding et al had explicitly suggested the use of a speech synthesizer as an addition to a visual output. On page 60, Lazzaro explicitly states a speech-synthesis system has been employed to help blind people to read and nonverbal people to speak. In view of the Figure on page 62 of Lazzaro, Graf, and column 6, lines 5-10 of Baker et al a head control means, eye control means, or hand control means can be used in a computer system.

SUMMARY

The test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. See In re Bozek, 163 USPQ 545.

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A reference is to be considered not only for what it expressly states, but for what it would reasonably have suggested to one of ordinary skill in the art. See In re DeLisle, 160 USPQ 806.

The number of references does not have a bearing on the propriety of the rejection; theoretically such could be infinite. See Ex parte Fine, 1927 C.D. 84.

One cannot show non-obviousness by attacking the references individually where the rejection is based on a combination of references. See In re Young, 159 USPQ 725.

It has been shown above that Baker et al reasonably had suggested the display with a plurality of selectable region in a polygon or display as set forth in claims 1, 6, 73, 80, 85, 86, 90, 91, 94, 98, 101, 104, and 106. In column 9 - column 10 of Baker et al., not only is a dwell condition suggested but obviously a duration counting means would be necessary to establish whether the cursor is in a region after a certain time. It was pointed out above that Baker et al never explicitly states the cursor remains in the region for the complete certain time. See for example applicant claims 90 and 104.

Baker et al also suggests the overshoot subregion (i.e. exterior box - Fig. 9) in applicant claim 106. Further note Figure 3 of Callahan et al (CHI 88) suggest an area beyond a menu item can be associated with the menu item. Such would obviously

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be an overshoot subregion. See the above combination of Baker et al and Callahan et al (CHI 88).

Golding et al was used to show that at the time the invention was made it was known in the art that a voice output could be used with the teaching in Baker et al as set forth in applicant claims. Here Lazzaro was only used to indicate that it was known nonverbal people could use a speech-synthesis system coupled to a Baker et al type device.

Here note that Lazzaro, Graf, and WiViK₂ were used as coupling references to help clarify links between the primary reference of Baker et al and secondary reference of Golding et al and Callahan et al.

7. Barnett et al teach a speech output for a computer. McKiel, Jr. teaches audible output for a computer. Scudder ('716 and '145) and Garwin et al teach input means for a computer.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to U. Weldon whose telephone number is (703) 305-4389. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for this Group is (703) 305-9508.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

U. Weldon/skf
May 2, 1996


ULYSSES WELDON
PRIMARY EXAMINER
GROUP 2600